

100      110      120      130

| Real Facts |         |       |      |
|------------|---------|-------|------|
| Customer   | Article | Month | Sale |
| Miller     | a4711   | Jul   | 30   |
| Brown      | a4711   | Jan   | 60   |
| Miller     | a4711   | Jan   | 30   |
| Miller     | a4711   | May   | 70   |
| Miller     | a0815   | Dec   | 30   |
| Jones      | a4711   | Jan   | 50   |
| Jones      | a0815   | Aug   | 50   |
| Brown      | a0815   | Oct   | 60   |
| Jones      | a4711   | Nov   | 20   |
| Miller     | a4711   | Mar   | 40   |
| Brown      | a4711   | Sep   | 10   |
| Jones      | a0815   | Feb   | 60   |
| Brown      | a0815   | Apr   | 30   |
| Brown      | a4711   | Dec   | 30   |
| Brown      | a0815   | Feb   | 50   |
| Jones      | a0815   | Sep   | 30   |
| Jones      | a0815   | Mar   | 50   |
| Brown      | a0815   | Nov   | 20   |
| Miller     | a0815   | Apr   | 70   |
| Jones      | a4711   | Jun   | 10   |

FIG. 1A

150      160      170

| Pivot view |         |       |    |
|------------|---------|-------|----|
| Customer   | Article | Sales |    |
| Brown      | a0815   | 50    | 30 |
| Jones      | a0815   | 110   | 80 |
| Miller     | a0815   | 50    | 10 |
|            | a4711   | 70    | 30 |

140

FIG. 1B

| Pivot Sequence |       |      |         |
|----------------|-------|------|---------|
| PSeq           | Facid | Stat | NextGip |
| 1              | 15    | True | 1       |
| 2              | 13    | True | 2       |
| 3              | 8     | True | 3       |
| 4              | 18    |      | 3       |
| 5              | 2     | True | 4       |
| 6              | 11    | True | 5       |
| 7              | 14    | True | 6       |
| 8              | 12    | True | 7       |
| 9              | 17    |      | 7       |
| 10             | 7     | True | 8       |
| 11             | 16    |      | 8       |
| 12             | 6     | True | 9       |
| 13             | 20    | True | 10      |
| 14             | 9     | True | 11      |
| 15             | 19    | True | 12      |
| 16             | 5     | True | 13      |
| 17             | 3     | True | 14      |
| 18             | 10    |      | 14      |
| 19             | 4     | True | 15      |
| 20             | 1     | True | 16      |

FIG. 10

200

| Real Facts |          |         |       |       |
|------------|----------|---------|-------|-------|
| Fact       | Customer | Article | Month | Sales |
| 1          | Miller   | a4711   | Jul   | 30    |
| 2          | Brown    | a4711   | Jan   | 60    |
| 3          | Miller   | a4711   | Jan   | 30    |
| 4          | Miller   | a4711   | May   | 70    |
| 5          | Miller   | a0815   | Dec   | 30    |
| 6          | Jones    | a4711   | Jan   | 50    |
| 7          | Jones    | a0815   | Aug   | 50    |
| 8          | Brown    | a0815   | Oct   | 60    |
| 9          | Jones    | a4711   | Nov   | 20    |
| 10         | Miller   | a4711   | Mar   | 40    |
| 11         | Brown    | a4711   | Sep   | 10    |
| 12         | Jones    | a0815   | Feb   | 60    |
| 13         | Brown    | a0815   | Apr   | 30    |
| 14         | Brown    | a4711   | Dec   | 30    |
| 15         | Brown    | a0815   | Feb   | 50    |
| 16         | Jones    | a0815   | Sep   | 30    |
| 17         | Jones    | a0815   | Mar   | 50    |
| 18         | Brown    | a0815   | Nov   | 20    |
| 19         | Miller   | a0815   | Apr   | 70    |
| 20         | Jones    | a4711   | Jun   | 10    |

FIG. 2A

250

| Pivot view |          |         |       |    |
|------------|----------|---------|-------|----|
|            | Customer | Article | Sales |    |
|            | Brown    | a0815   | 15    | Q1 |
|            | Brown    | a4711   | 2     | Q2 |
|            | Jones    | a0815   | 12    | Q3 |
|            | Jones    | a4711   | 6     | Q4 |
|            | Miller   | a0815   | 19    |    |
|            | Miller   | a4711   | 3     |    |

210

FIG. 2B

| Pivot Sequence |       |
|----------------|-------|
| PSeq           | Fact# |
| 1              | 15    |
| 2              | 13    |
| 3              | 8     |
| 4              | 18    |
| 5              | 2     |
| 6              | 11    |
| 7              | 14    |
| 8              | 12    |
| 9              | 17    |
| 10             | 7     |
| 11             | 16    |
| 12             | 6     |
| 13             | 20    |
| 14             | 9     |
| 15             | 19    |
| 16             | 5     |
| 17             | 3     |
| 18             | 10    |
| 19             | 4     |
| 20             | 1     |

FIG. 2C

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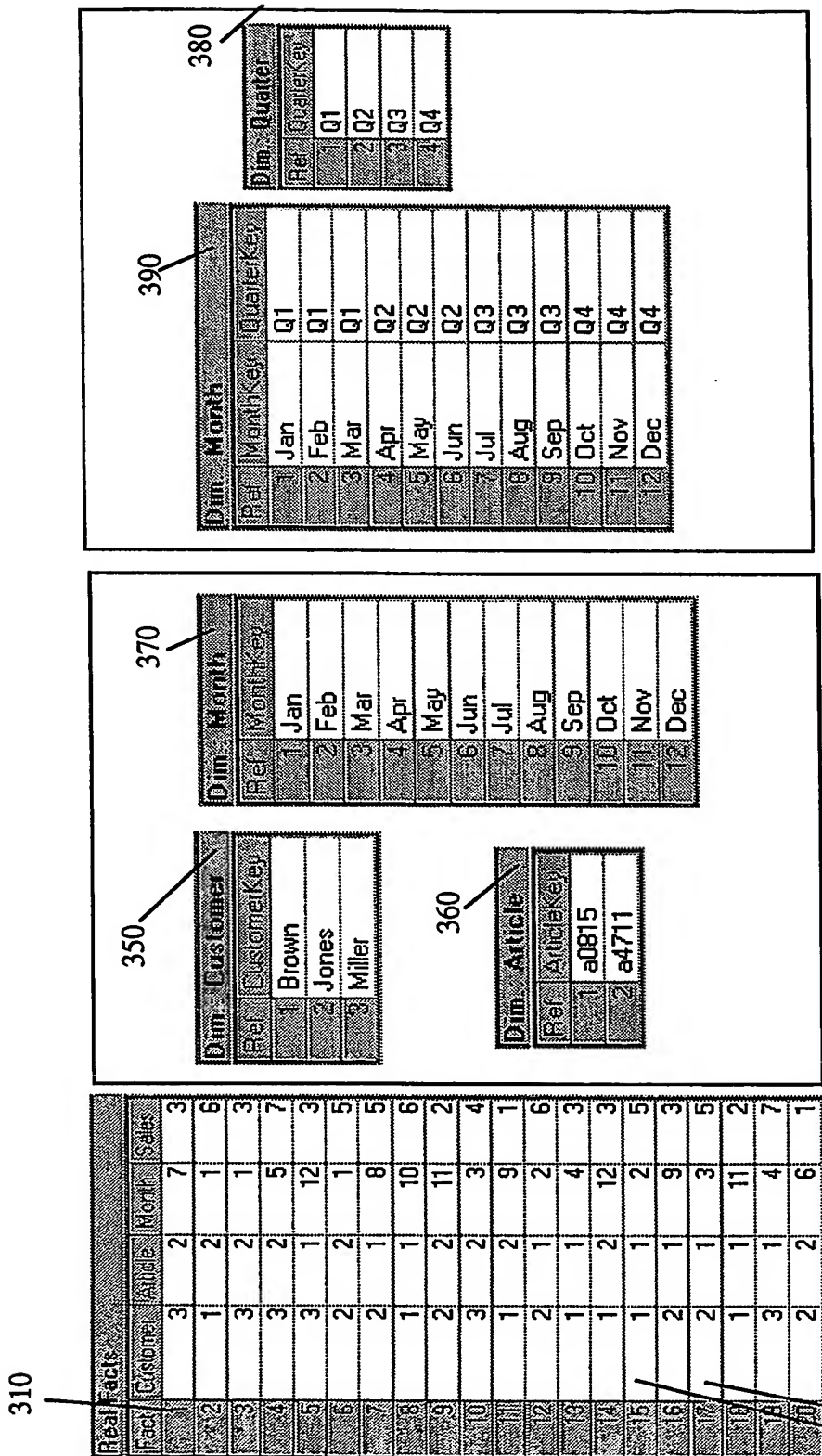


FIG. 3C

FIG. 3B

FIG. 3A

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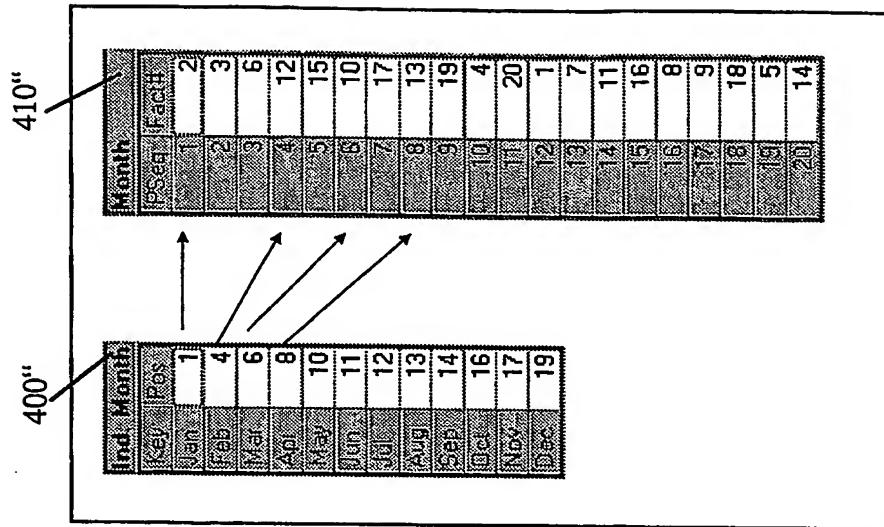


FIG. 4C

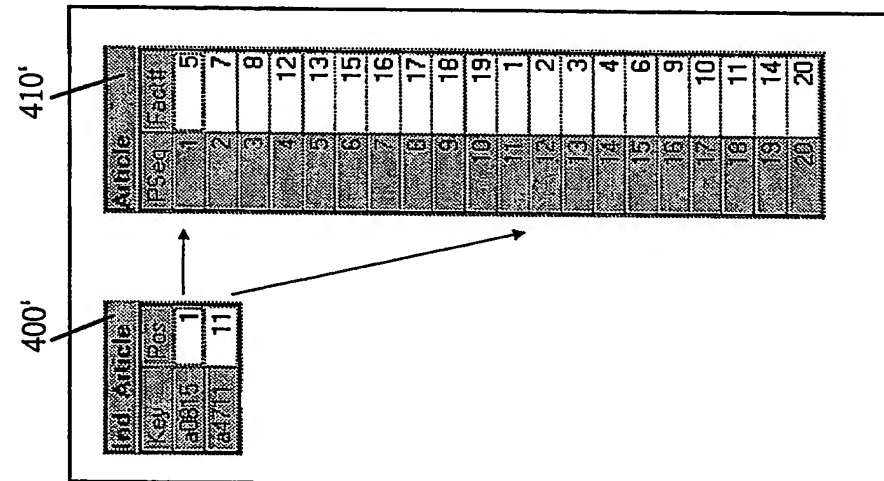


FIG. 4B

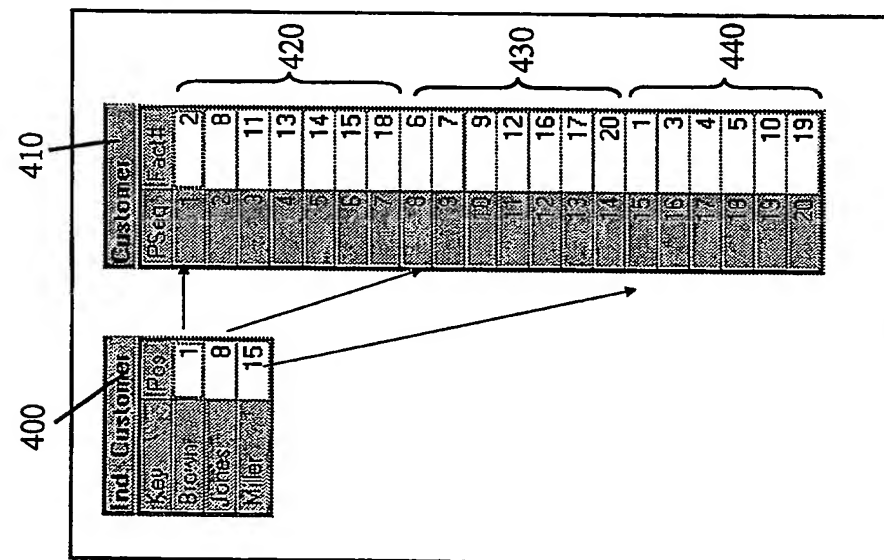


FIG. 4A

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| Sorted Sequence |     |      | Mapping |        |     | Sort operation pointer |         |  | Result Remutation |      |      |
|-----------------|-----|------|---------|--------|-----|------------------------|---------|--|-------------------|------|------|
| IPSeq           | Grp | Path | Path    | TimeSp | Grp | EDGrp                  | NextPos |  | IPSeq             | Path | Stat |
| 1               | 1   | 5    | 1       | 3      | 1   | 1                      | 1       |  | 1                 |      |      |
| 2               | 1   | 7    | 2       | 1      | 2   | 2                      | 8       |  | 2                 |      |      |
| 3               | 1   | 8    | 3       | 3      | 3   | 3                      | 15      |  | 3                 |      |      |
| 4               | 1   | 12   | 4       | 3      | 4   |                        |         |  | 4                 |      |      |
| 5               | 1   | 13   | 5       | 3      | 5   |                        |         |  | 5                 |      |      |
| 6               | 1   | 15   | 6       | 2      | 6   |                        |         |  | 6                 |      |      |
| 7               | 1   | 16   | 7       | 2      | 7   |                        |         |  | 7                 |      |      |
| 8               | 1   | 17   | 8       | 1      | 8   |                        |         |  | 8                 |      |      |
| 9               | 1   | 18   | 9       | 2      | 9   |                        |         |  | 9                 |      |      |
| 10              | 1   | 19   | 10      | 3      | 10  |                        |         |  | 10                |      |      |
| 11              | 2   | 1    | 11      | 1      | 11  |                        |         |  | 11                |      |      |
| 12              | 2   | 2    | 12      | 2      | 12  |                        |         |  | 12                |      |      |
| 13              | 2   | 3    | 13      | 1      | 13  |                        |         |  | 13                |      |      |
| 14              | 2   | 4    | 14      | 1      | 14  |                        |         |  | 14                |      |      |
| 15              | 2   | 6    | 15      | 1      | 15  |                        |         |  | 15                |      |      |
| 16              | 2   | 9    | 16      | 2      | 16  |                        |         |  | 16                |      |      |
| 17              | 2   | 10   | 17      | 2      | 17  |                        |         |  | 17                |      |      |
| 18              | 2   | 11   | 18      | 1      | 18  |                        |         |  | 18                |      |      |
| 19              | 2   | 14   | 19      | 3      | 19  |                        |         |  | 19                |      |      |
| 20              | 2   | 20   | 20      | 2      | 20  |                        |         |  | 20                |      |      |

FIG. 5



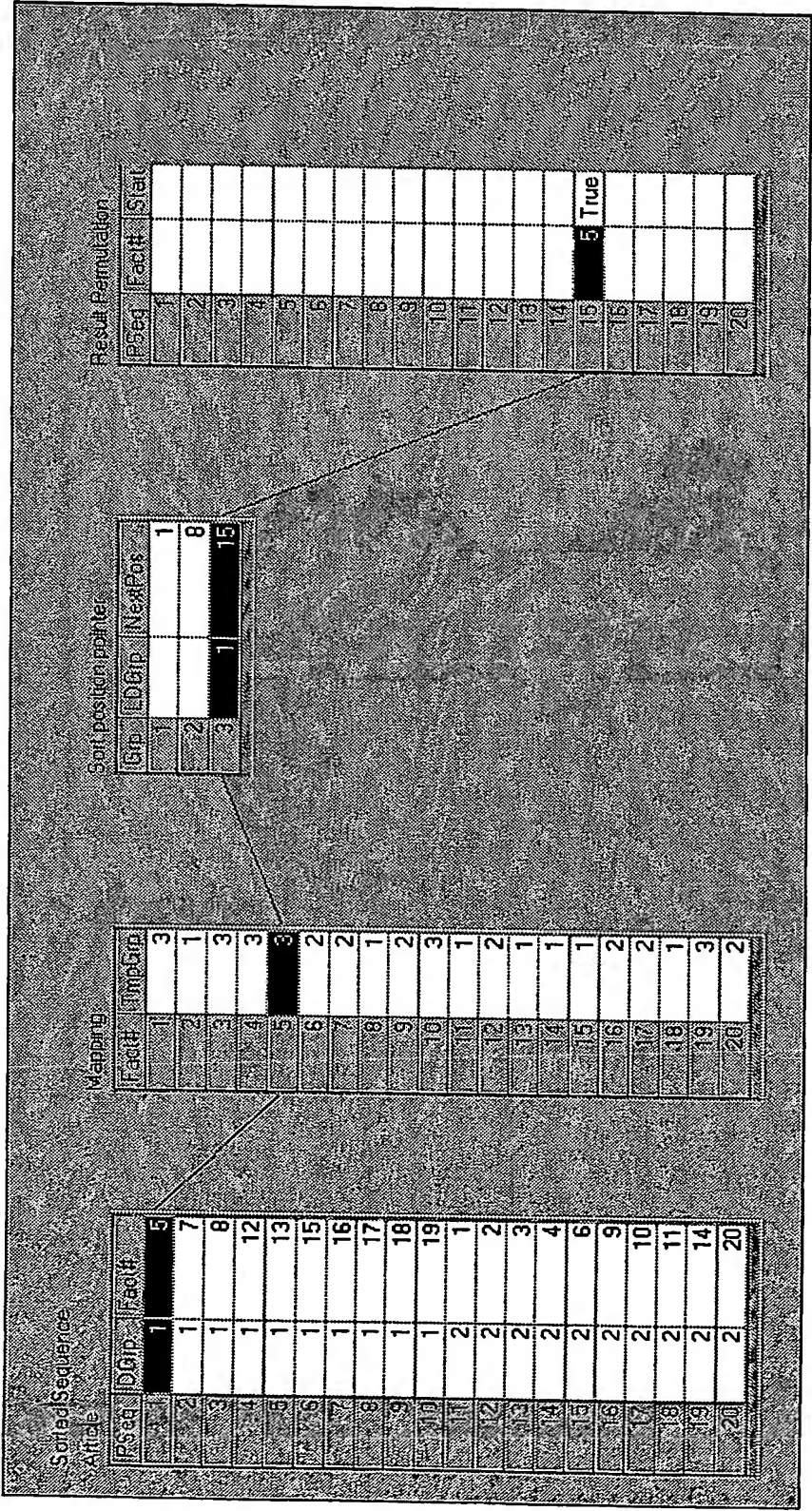
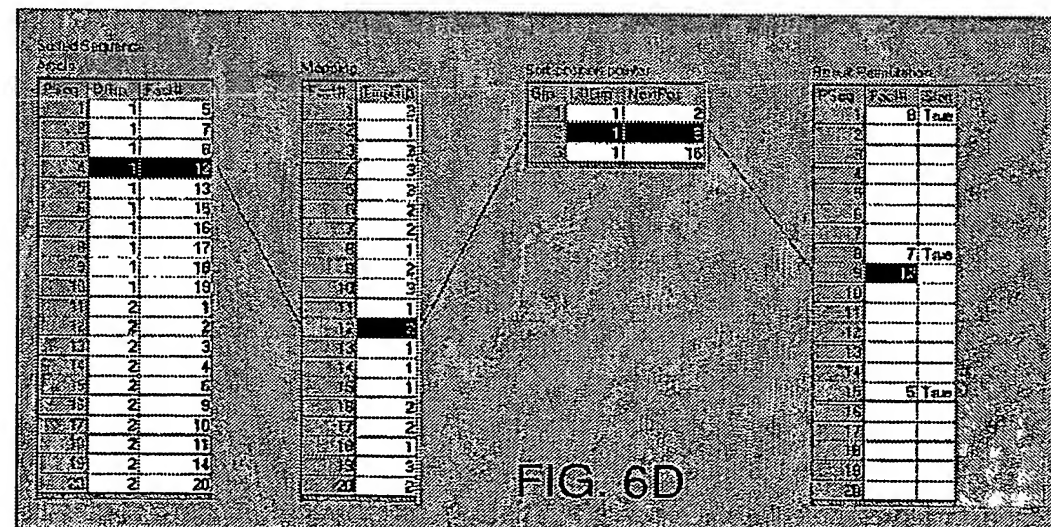
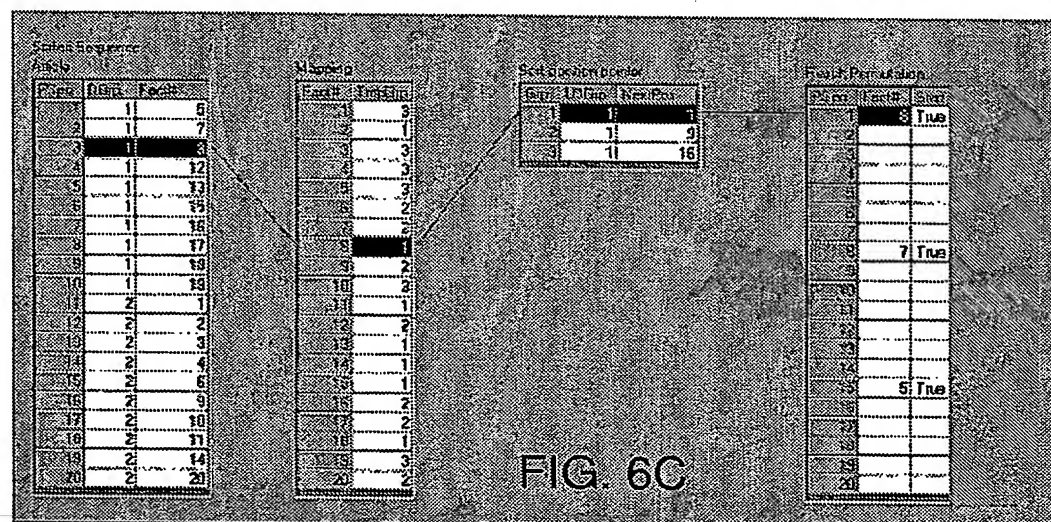
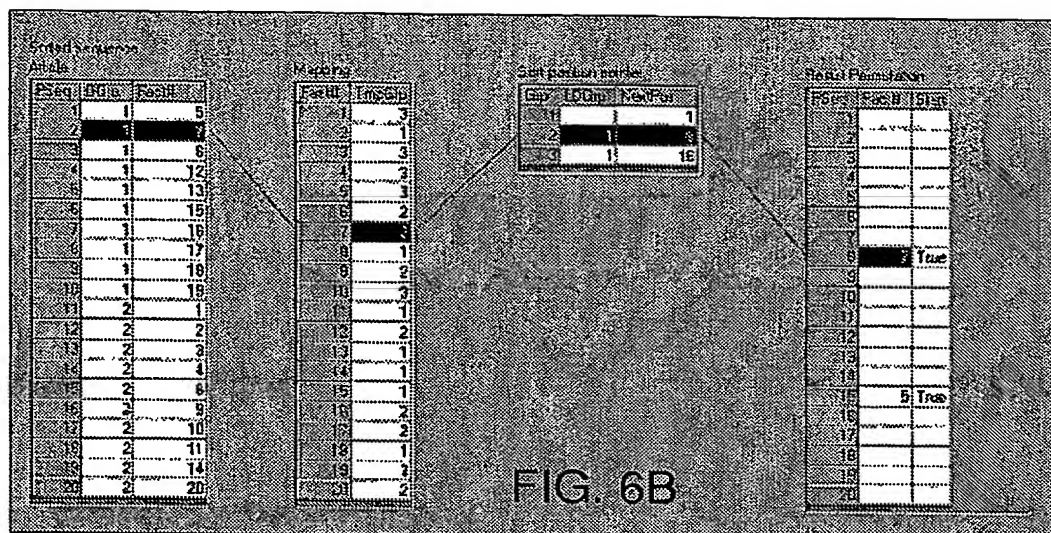
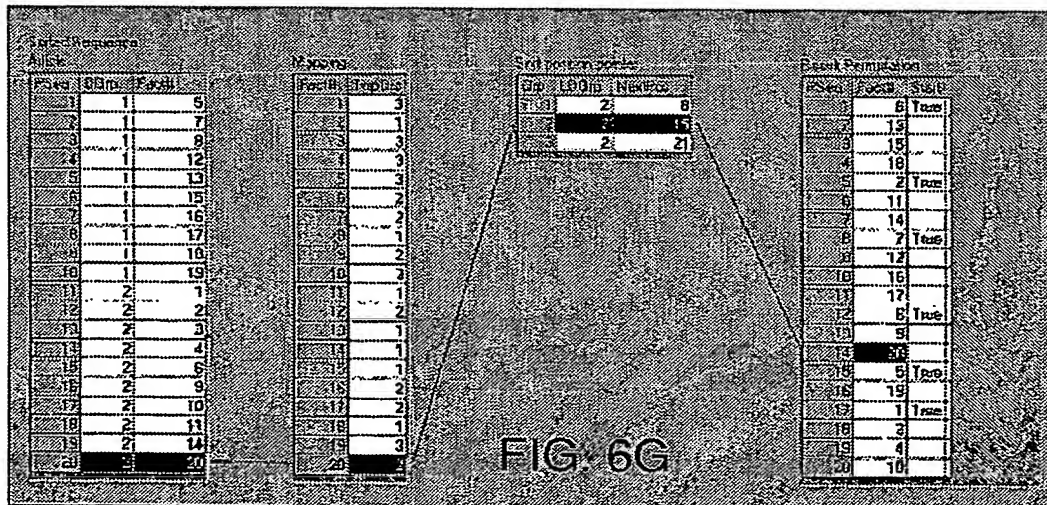
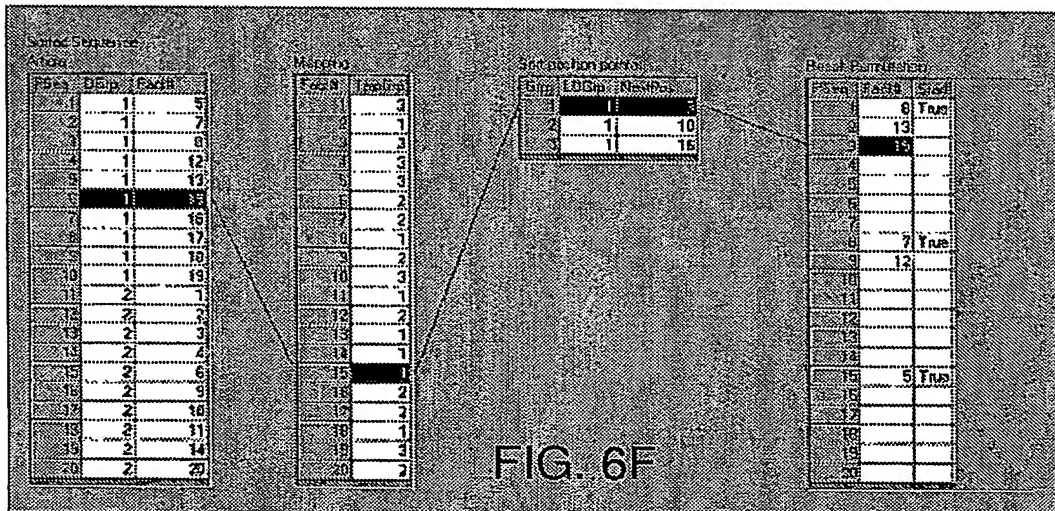
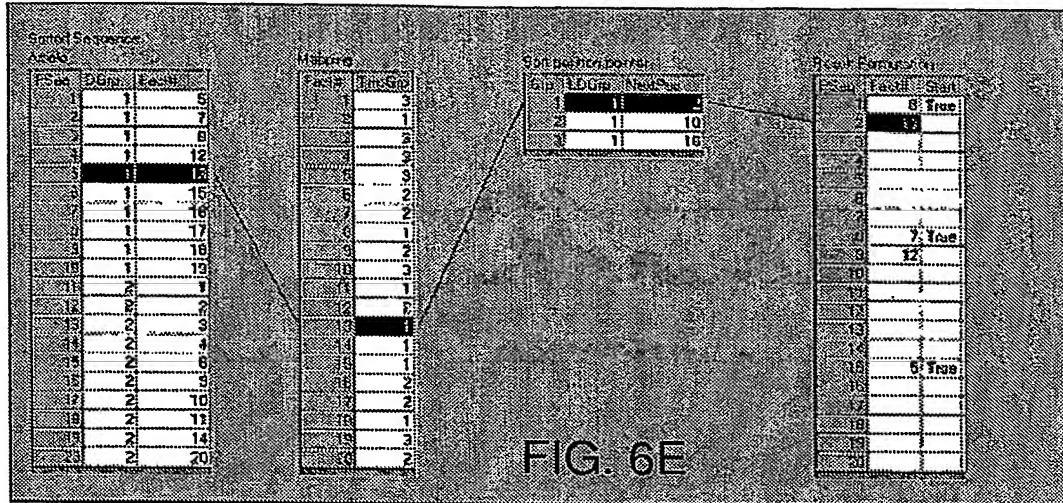


FIG. 6A

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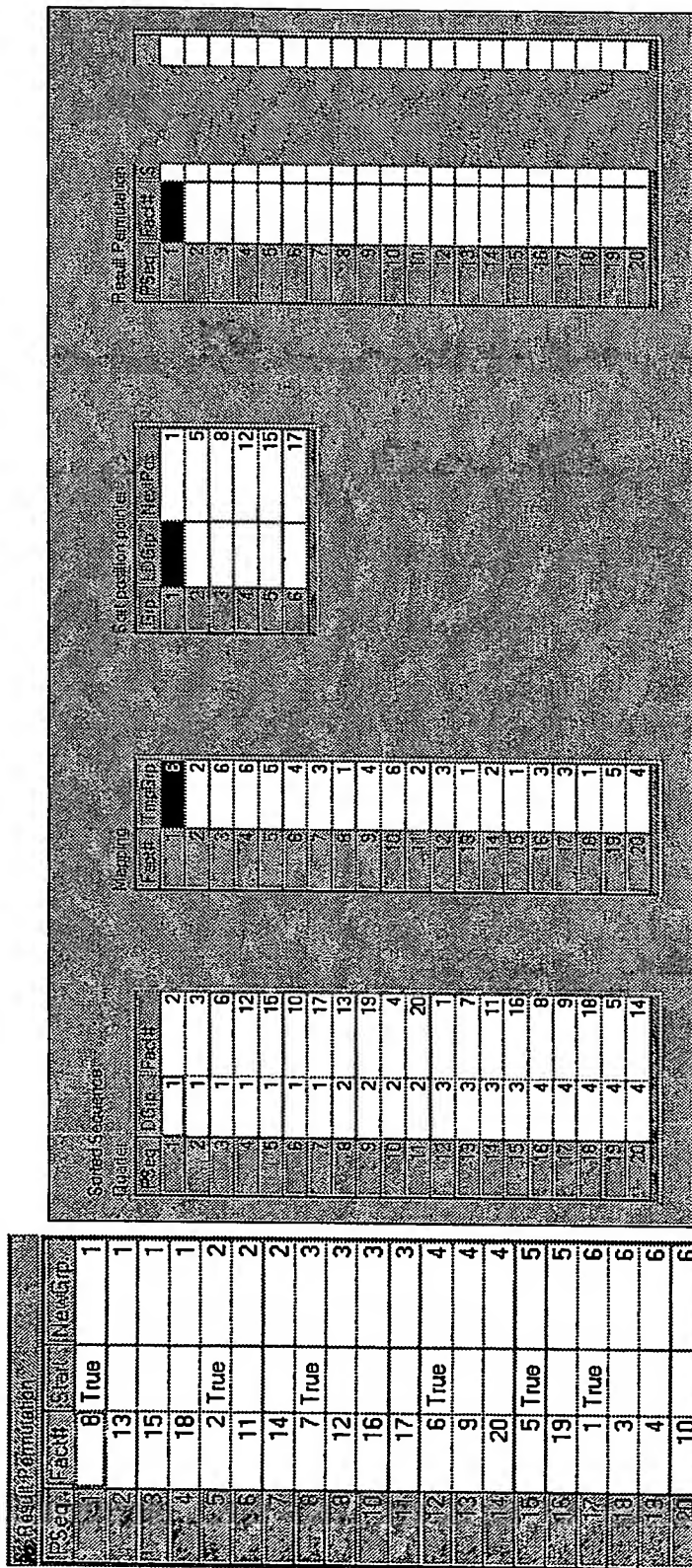
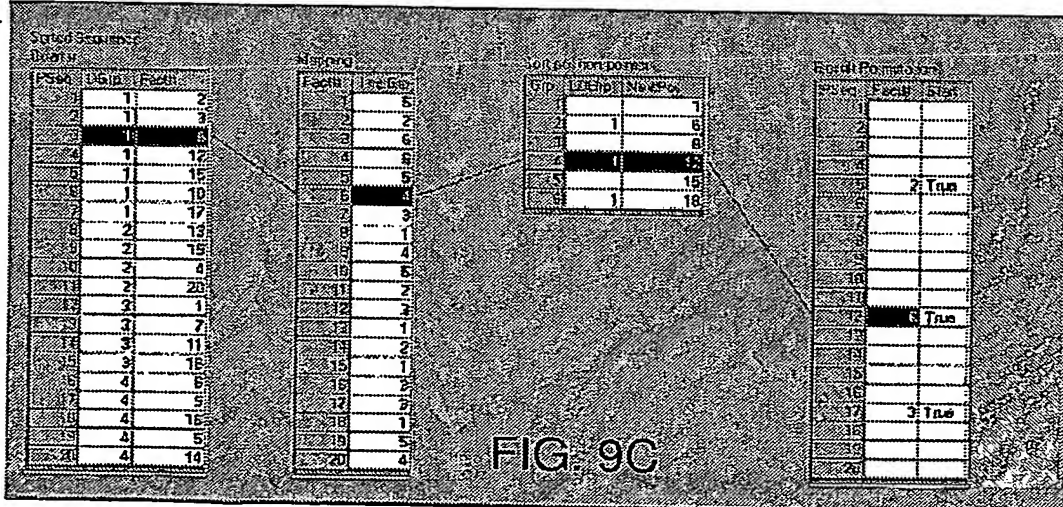
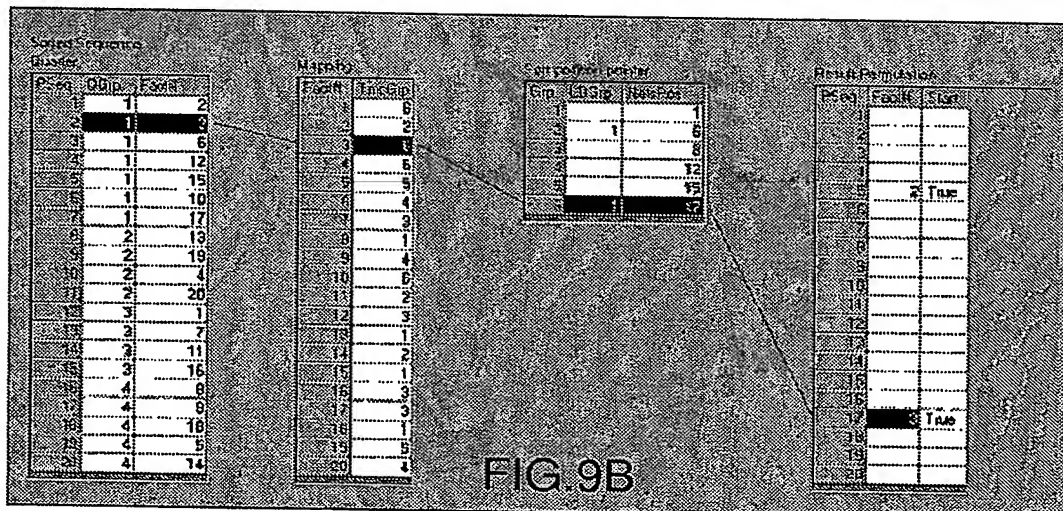
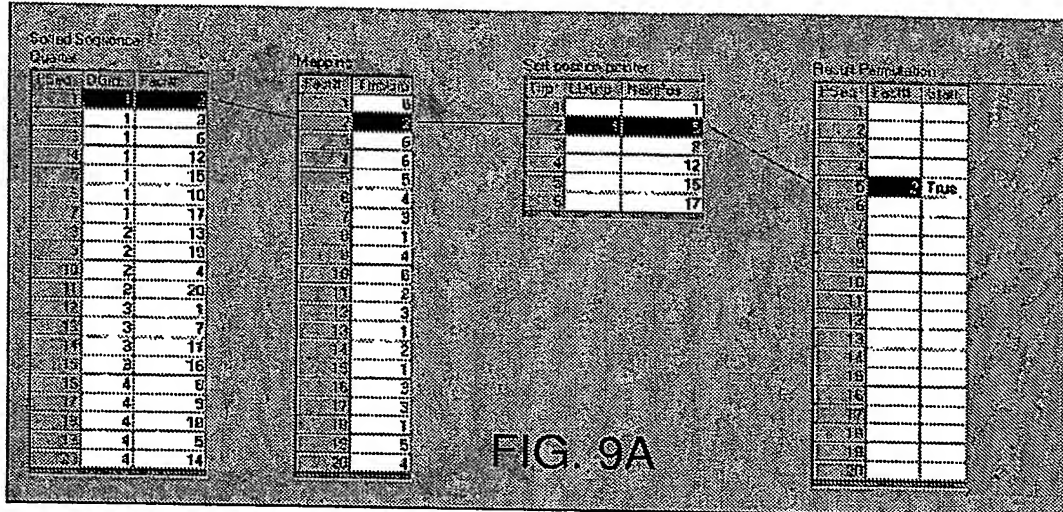
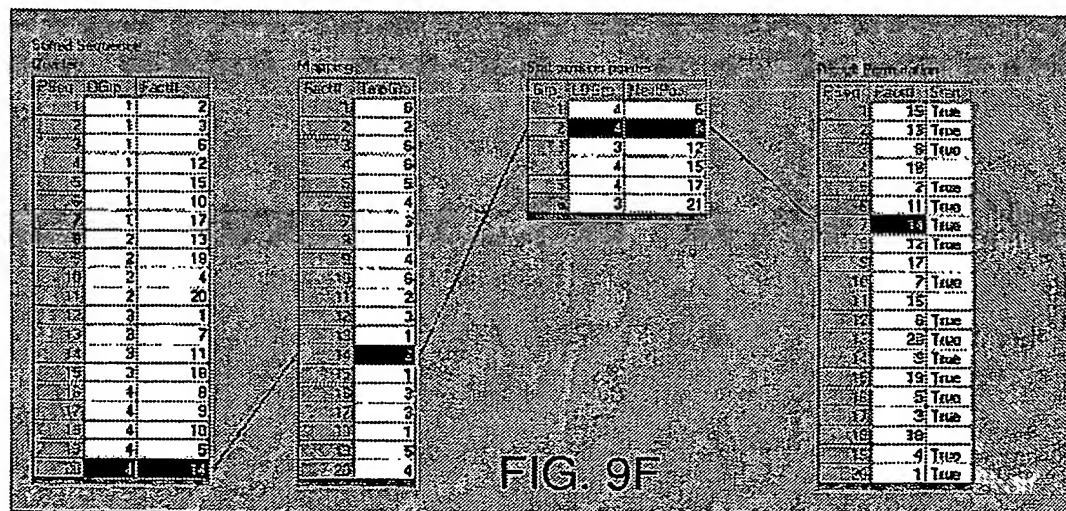
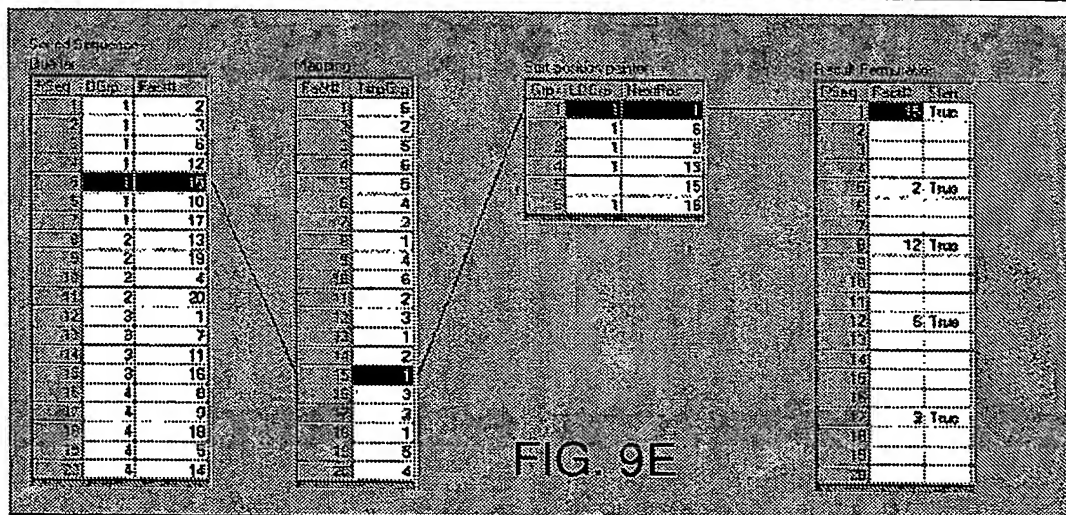
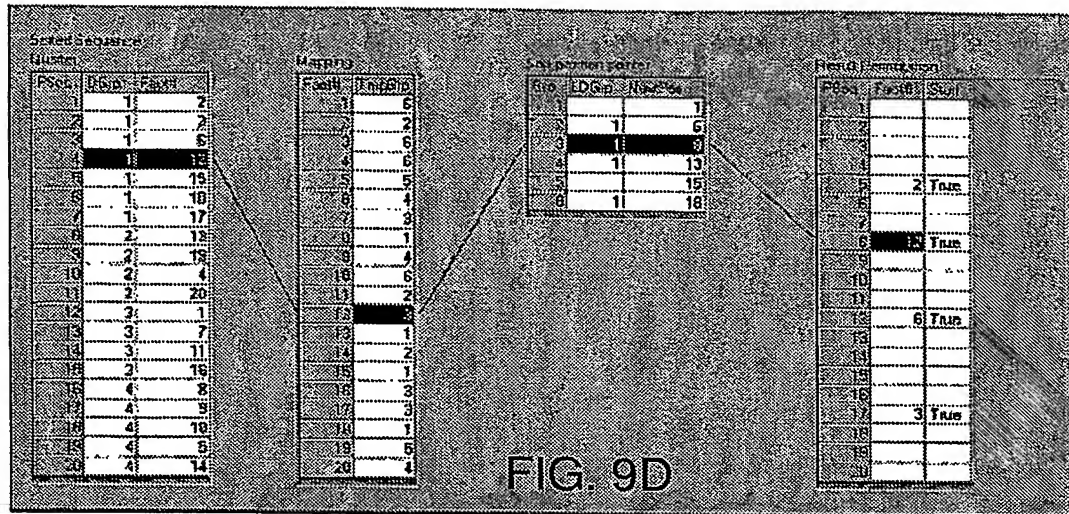


FIG. 8

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